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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,351	11/30/2001	Yoshifusa Wada	P/1927-7	5516

7590 07/15/2004

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EXAMINER

WU, XIAO MIN

ART UNIT PAPER NUMBER

2674

DATE MAILED: 07/15/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,351

Applicant(s)

WADA ET AL.

Examiner

XIAO M. WU

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. (US Patent No. 5,796,445) in view of Jayant et al (US Patent No. 5,473,384).

As to claims 1, 8, 12, 19, 23, 30, Nomura discloses a method of filtering process for attenuation to a frequency component in a designed frequency band of a frequency of variation of a dynamic image, the method comprising the step of: detecting the moving object (e.g. measuring the magnitude of temporal changes in RGB components of the input digital moving picture). Nomura further discloses that a picture temporal frequency attenuating device adaptively attenuate a particular temporal frequency band of an input moving picture signal indicative of input moving picture supplied from a moving picture output device to produce a

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smoothly-changing moving picture signal indicative of adaptively frequency attenuated moving picture. The particular temporal frequency band includes human sensitive frequency components (col. 6, line 6 to col. 7, line 5). Nomura also discloses that the picture temporal frequency attenuating device 20A **selectively attenuates** a particular frequency band of the input analog moving picture signal to produce, as an output analog moving picture signals, a smoothly-changing analog moving picture signal indicative of selectively frequency attenuated moving pictures (col. 12, lines 28-33). It is noted that Nomura does not specifically disclose at least a part of the moving object to a modified filtering process with at least a reduced attenuation and also a remaining part of the moving object to a normal filtering processing with a non-reduced attenuation which is larger in magnitude than the reduced attenuation. Jayant is cited to teach a method of and system for enhancing a moving image display device including a motion compensating temporal filter (110) for dynamic pixels. As shown in 6, Jayant discloses edge pixel detection for detecting edge pixel of moving image. Based on the detection, different filter processing is performed. For example, when edge pixel of the moving picture is detected, a multi-level median filter is processing the pixel data, and when a non-edge pixel of the moving picture is detected, a median filter is processing the pixel data. In other words, the edge pixel and non-edge pixel are filtered by different filtering processes. It would have been obvious to one of ordinary skill in the art to have modified Nomura's device such that different attenuations of frequencies for different parts of the moving picture because frequency components in edge pixel and non-edge pixel are different and they can be filtered by different filter processing such as suggest by Jayant.

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As to claims 2, 9,13, 20, 24, 31, Nomura as modified would provide an entirety of the moving object is uniformly subjected to the modified filtering process.

As to claims 3, 10, 14, 21, 25, 32, Nomura discloses that the object is extract depending on a brightness, and a color of the object (col. 22, line 43; col. 20, lines 4-14).

As to claims 4-6, 15-17,26-28, Nomura as modified would provide a reduced attenuation for edge pixel from a single or plural magnitudes.

As to claims 6, 11, 18, 22, 29, 33, Jayant discloses a decoder prior to the filtering processing (see Fig. 3).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The US Patents 4,860,104, 5,404,178, 5,886,744, 5,949,916, 6,185,254 are cited to teach an image enhancement device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiao Wu whose telephone number is (703) 305-4721.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377

xw

July 11, 2004


XIAO WU
PRIMARY EXAMINER
ART UNIT 2674